

CLAIMS

What is claimed is:

1. A method for promoting cardiac tissue repair comprising administering to the cardiac tissue a therapeutically effective amount of an angiogenic thrombin derivative peptide.
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2. The method according to Claim 1 wherein said peptide comprises a thrombin receptor binding domain having the sequence Arg-Gly-Asp-Ala (SEQ ID NO. 1); and a serine esterase conserved sequence.
3. The method of Claim 2 wherein the serine esterase conserved sequence comprises Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID NO. 2).
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4. The method of Claim 2 wherein the thrombin derivative peptide comprises the amino acid sequence: Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID NO. 3).
5. The method of Claim 1 wherein the thrombin derivative peptide consists of the amino acid sequence Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID NO. 4).
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6. The method of Claim 1 wherein the peptide is administered during or following cardiac surgery.
7. The method of Claim 1 wherein the peptide is administered by injection into the cardiac tissue.
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8. The method of Claim 1 wherein a sustained release formulation comprising the angiogenic thrombin derivative peptide is administered to the cardiac tissue.
9. The method of Claim 8 wherein the sustained release formulation is a polylactic acid/polyglycolic acid microparticles comprising the angiogenic thrombin derivative peptide
10. A method of stimulating revascularization comprising administering to cardiac tissue a therapeutically effective amount of an angiogenic thrombin derivative peptide.
11. A method of stimulating vascular endothelial cell proliferation in a patient in need of such treatment comprising administering to the patient a therapeutically effective amount of an angiogenic thrombin derivative peptide.
12. A method of inhibiting restenosis in a patient following balloon angioplasty, said method comprising administering to the patient a therapeutically effective amount of an angiogenic thrombin derivative peptide.
13. The method of Claim 12 wherein the peptide is coated onto a balloon angioplasty catheter.
14. The method of Claim 12 wherein the angiogenic thrombin derivative peptide is administered systemically.
15. The method of Claim 12 wherein the angiogenic thrombin derivative peptide is administered locally to a balloon induced damaged area of a blood vessel.
16. The method of Claim 12 wherein a stent coated with the angiogenic thrombin derivative peptide is inserted into a blood vessel at a balloon induced damaged area.

17. The method of Claim 12 wherein said peptide comprises a thrombin receptor binding domain having the sequence Arg-Gly-Asp-Ala (SEQ ID NO. 1); and a serine esterase conserved sequence.
18. The method of Claim 17 wherein the serine esterase conserved sequence comprises
5 Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID NO. 2).
19. The method of Claim 17 wherein the thrombin derivative peptide comprises the amino acid sequence: Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID NO. 3).
20. The method of Claim 12 wherein the thrombin derivative peptide consists of the
10 amino acid sequence Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID NO. 4).
21. A stent coated with an angiogenic thrombin derivative peptide.
22. A method of inhibiting vascular occlusion in a patient, said method comprising
15 administering to the patient a therapeutically effective amount of a thrombin derivative peptide.